

### **Remarks**

In view of the above amendments and the following remarks, reconsideration of the rejections and further examination are requested.

Claims 22, 29, 31 and 87 have been amended to make a number of editorial revisions thereto. These revisions have been made to place the claims in better U.S. form. None of these amendments have been made to narrow the scope of protection of the claims, or to address issues related to patentability, and therefore, these amendments should not be construed as limiting the scope of equivalents of the claimed features offered by the Doctrine of Equivalents.

Claims 1-47 and 81-91 are rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. Specifically, the rejection indicates that (1) the sealing layer having a plurality of recesses opening at least towards the sensor platform recited in claim 1, (2) the sample compartments adapted such that sample solutions or reagent solutions received therein are removable therefrom recited in claim 1, and (3) the grating structures extending over at least a portion of the sample compartments recited in claim 34 are not supported by the specification. This rejection is respectfully traversed for the following reasons.

Initially, it is noted that M.P.E.P. section 2163.02 sets forth the standard for determining compliance with the written description requirement. As set forth in this section of the M.P.E.P., “[a]n objective standard for determining compliance with the written description requirement is, ‘does the description clearly allow persons of ordinary skill in the art recognize that he or she invented what is claimed.’” (Citing *In re Gosteli*, 872 F.2d 1008, 1012, 10 USPQ2d 1614, 1618 (Fed. Cir. 1989). Further, it is noted that this section of the M.P.E.P. also states that, “[t]he subject matter of the claimed invention need not be described literally (i.e., using the same terms or *in haec verba*) in order for the disclosure to satisfy the description requirement.”

Regarding limitation (1), as correctly noted by the Examiner, the specification does disclose that the device has a number of recesses at least opening towards the sensor platform which form a corresponding multitude of sample compartments. Further, this section of the specification does not explicitly disclose that the sealing layer has the recesses which form the sample compartments. However, referring to Figure 1, it is clear that the sealing layer (g) is illustrated on opposite sides of the portion of the planer optical waveguide, and has a recess formed therein that defines the sample compartment. Therefore, it is apparent that one of ordinary skill in the art after reading the specification and referring to Figure 1 would recognize

that the sealing layer (g) has the recesses which form the sample compartments. Further, if the basis of this rejection is that the language in specification does not word for word correspond to the language in the claim, as appears to be the case from the explanation in the rejection, this is clearly improper as discussed above with regard to M.P.E.P. section 2163.02.

As for limitation (2), the specification recites that the sample compartments are operable to be cleared of the received sample or reagent solutions. In other words, the sample compartments are such that the sample or reagent solutions can be removed therefrom. This feature is unmistakably shown in Figure 1 where the sample or reagent solutions can be added or removed from the open ends of the sample compartments. Therefore, it is clear that one of ordinary skill in the art after reading the specification and referring to Figure 1 would recognize that the sample compartments are adapted such that the sample or reagent solutions received therein are removable therefrom, and further sample or reagent solutions are receivable therein. Again, it appears from the explanation in the rejection that the Examiner is making this rejection because the language in the specification does not word for word correspond to the language in the claim. However, applying such a standard for 35 U.S.C. §112, first paragraph, is clearly improper.

In regard to limitation (3), the specification recites that grating structures extend over the range of multiple or all sample compartments as indicated by the Examiner. However, the Examiner's attention is again brought to Figure 1, which clearly illustrates that the grating structure (c) extends over a portion of the sample compartment (i.e., from the left hand side of the sample compartment defined by the sealing layer (g) to approximately 1/3 of the way across the sample compartment). Therefore, it is apparent that this limitation is clearly supported by the specification.

In light of the above discussion, withdrawal of the rejection under 35 U.S.C. §112, first paragraph, is respectfully requested.

Claims 1-47 and 81-91 are rejected under 35 U.S.C §112, second paragraph, as being indefinite. This rejection is respectfully traversed for the following reasons.

Based on the explanation in the rejection, it is apparent that the relationship between the recesses in the sealing layer and the sample compartments is not clear to the Examiner. As discussed above, Figure 1 illustrates a section of the sealing layer (g) and the sensor platform of the device. Figure 1 clearly shows a recess in the sealing layer (g) that opens towards the sensor

platform (i.e., the optically transparent layer (a)). Further, it is apparent that the recess forms a sample compartment in which measurement areas (d) are located. Therefore, the recesses in the sealing layer (g) define the sample compartments. As a result, one of ordinary skill in the art would understand the recitation in claim 1 of each of the recesses of the sealing layer forming a corresponding sample compartment to mean that one recess defines one sample compartment. Based on this explanation, it submitted that the language in the claims related to the openings of the sealing layers and the sample compartments is definite in light of the disclosure in the specification. As a result, withdrawal of the rejection under 35 U.S.C. §112, second paragraph, is respectfully requested.

Claims 1-34, 38-40, 42-47, 81-84 and 86-91 are rejected under 35 U.S.C. §102(b) as being anticipated by Neuschäfer (WO 96/35940). Claims 35-37 are rejected under 35 U.S.C. §103(a) as being unpatentable over Neuschäfer in view of Hashimoto (US 6,480,639). Claims 41 and 85 are rejected under 35 U.S.C. §103(a) as being unpatentable over Neuschäfer. These rejections are respectfully traversed and submitted to be inapplicable to the claims for the following reasons.

Claim 1 is patentable over Neuschäfer, since claim 1 recites a device having, in part, a sensor platform having a planar optical waveguide; and a sealing layer forming, either directly or with a sealing medium, a tight seal with the planar optical waveguide, the sealing layer having a plurality of recesses opening at least towards the sensor platform, each of the recesses forming a corresponding sample compartment in a 2-dimensional arrangement. Neuschäfer fails to disclose or suggest a 2-dimensional arrangement of sample compartments on a planar optical waveguide as recited in claim 1.

Neuschäfer discloses a device having a laser diode 13, a coupling-in grating 3 located on a sensor platform 8, a coupling-out grating 3' also located on the sensor platform 8, and a detector 14. A first filter 9 is located between the laser diode 13 and the coupling-in grating 3 and a second filter 9 is located between the coupling-out grating 3' and the detector 14. The sensor platform 8 contains a waveguide 1 such that light enters the waveguide 1 from the coupling-in grating 3 and exits the waveguide 1 from the coupling-out grating 3'. A flow through cell 11 is attached to the bottom of the sensor platform 8 via a plurality of seals 10, thereby creating a sample space 12 between the sensor platform 8 and the flow through cell 11.

Further, Neuschäfer also discloses a waveguiding arrangement having a number of detection regions 4 located on a substrate 5. Each of the detection regions 4 includes the coupling-in grating 3 and, optionally, the coupling-out grating 3' and a number of divisions 2 forming a plurality of strip-like waveguiding regions in each of the detection regions 4. (See Figures 1a, 2a, 3a, 4a, 5a and 6 and page 29).

While Neuschäfer discloses the sample space 12 and the plurality of strip-like waveguiding regions defined by the divisions 2, it is apparent that Neuschäfer fails to disclose or suggest that the either of these elements includes a 2-dimensional arrangement of sample compartments. Instead, the sample space 12 appears to only represent a single sample compartment. Further, each of the strip-like waveguiding regions defined by the divisions 2, at best, can be said to include a 1-dimensional arrangement of sample compartments. In other words, none of the strip-like waveguiding regions, each of which could be deemed as corresponding to the claimed planar optical waveguide, includes a 2-dimensional arrangement of sample compartments. As a result, Neuschäfer fails to disclose or suggest the present invention as recited in claim 1.

As for Hashimoto, it is relied upon as disclosing an optically transparent resin 9 and a light absorbent 8. However, Hashimoto fails to disclose or suggest the 2-dimensional arrangement of sample compartments on the planar optical waveguide as recited in claim 1.

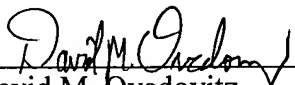
Since claim 1 is patentable over the references relied upon in the rejections, it is submitted that withdrawn claims 48-63 and 92 be given due consideration as being either directly or indirectly dependent from claim 1.

Because of the above-mentioned distinctions, it is believed clear that claims 1-63 and 81-92 are allowable over the references relied upon in the rejections. Furthermore, it is submitted that the distinctions are such that a person having ordinary skill in the art at the time of invention would not have been motivated to make any combination of the references of record in such a manner as to result in, or otherwise render obvious, the present invention as recited in claims 1-63 and 81-92. Therefore, it is submitted that claims 1-63 and 81-92 are clearly allowable over the prior art of record.

In view of the above amendments and remarks, it is submitted that the present application is now in condition for allowance. The Examiner is invited to contact the undersigned by telephone if it is felt that there are issues remaining which must be resolved before allowance of the application.

Respectfully submitted,

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